Yaswanth Janardhan Konduru

1001741845

App.py

import textwrap  
  
from flask import Flask, render\_template, request  
from werkzeug.utils import secure\_filename  
import pandas as pd  
import pyodbc  
import numpy as np  
  
app = Flask(\_\_name\_\_)  
  
driver = '{ODBC Driver 17 for SQL Server}'  
server\_name = 'anonymous'  
database\_name = 'csvdatabase'  
username = "anonymous"  
password = "Yash@3277"  
server = '{server\_name}.database.windows.net,1433'.format(server\_name=server\_name)  
connection\_string = textwrap.dedent('''  
 Driver={driver};  
 Server={server};  
 Database={database};  
 Uid={username};  
 Pwd={password};  
 Encrypt=yes;  
 TrustServerCertificate=no;  
 Connection Timeout=30;  
'''.format(  
 driver=driver,  
 server=server,  
 database=database\_name,  
 username=username,  
 password=password  
))  
conn = pyodbc.connect(connection\_string)  
cursor = conn.cursor()  
  
  
@app.route('/', methods=['GET', 'POST'])  
def index():  
 if request.method == 'POST':  
 f = request.files['csvupload']  
 f.save(secure\_filename(f.filename))  
 df = pd.read\_csv(f.filename)  
 print(df)  
 columns = df.columns  
 print(df['magError'])  
 df['mag'] = df['mag'].fillna(0.0)  
 df['magType'] = df['magType'].fillna("NA")  
 df['nst'] = df['nst'].fillna(0)  
 df['gap'] = df['gap'].fillna(0.0)  
 df['dmin'] = df['dmin'].fillna(0.0)  
 df['horizontalError'] = df['horizontalError'].fillna(0.0)  
 df['magError'] = df['magError'].fillna(0.0)  
 df['magNst'] = df['magNst'].fillna(0.0)  
 print(columns[0], columns[21])  
 cursor.execute('CREATE TABLE earthquake\_data(Time nvarchar(50), Latitude float, Longitude float, Depth float, Mag float NULL DEFAULT 0.0, Magtype nvarchar(50) NULL DEFAULT 0.0, Nst int NULL DEFAULT 0.0, Gap float NULL DEFAULT 0.0, Dmin float NULL DEFAULT 0.0, Rms float, Net nvarchar(50), ID nvarchar(50), Updated nvarchar(50), Place nvarchar(MAX), Type nvarchar(50), HorizontalError float NULL DEFAULT 0.0, DepthError float, MagError float NULL DEFAULT 0.0, MagNst int NULL DEFAULT 0.0, Status nvarchar(50), LocationSource nvarchar(50), MagSource nvarchar(50))')  
  
 for row in df.itertuples():  
 print(row)  
 cursor.execute("INSERT INTO csvdatabase.dbo.earthquake\_data VALUES (?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?)", row.time, row.latitude, row.longitude, row.depth, row.mag, row.magType, row.nst, row.gap, row.dmin, row.rms, row.net, row.id, row.updated, row.place, row.type, row.horizontalError, row.depthError, row.magError, row.magNst, row.status, row.locationSource, row.magSource)  
  
 conn.commit()  
 return 'file uploaded successfully'  
 return render\_template("index.html")  
  
  
@app.route('/eqcount', methods=['GET', 'POST'])  
def eq\_count():  
 earthquakes = []  
 if request.method == 'POST':  
 magnitude = request.form.get('count')  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag > ?", magnitude)  
 for data in cursor:  
 earthquakes.append(data)  
 earthquake\_len = len(earthquakes)  
 return render\_template('eq\_count.html', earthquakes = earthquakes, length = earthquake\_len)  
  
  
@app.route('/rangecount', methods=['GET', 'POST'])  
def range\_count():  
 earthquakes = []  
 if request.method == 'POST':  
 startmag = request.form.get('startrange')  
 stopmag = request.form.get('stoprange')  
 timing = request.form.get('timerange')  
 print(startmag, stopmag, timing)  
  
 if timing == "Recent Week":  
 time = '2021-06-05T00:00:00.000Z'  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag > ? and Mag < ? and Time > ?",startmag, stopmag, time)  
 for data in cursor:  
 earthquakes.append(data)  
 else:  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag > ? and Mag < ?", startmag, stopmag)  
 for data in cursor:  
 earthquakes.append(data)  
 earthquake\_len = len(earthquakes)  
 return render\_template('range\_count.html', earthquakes = earthquakes, length = earthquake\_len)  
  
  
@app.route('/eqlocation', methods=['GET', 'POST'])  
def eq\_location():  
 eq\_area = []  
 cursor.execute("SELECT Area = right(rtrim([place]),charindex(' ',reverse(rtrim([place]))+' ')-1) From earthquake\_data")  
 for data in cursor:  
 for value in data:  
 eq\_area.append(value)  
 eq\_area\_list = list(set(eq\_area))  
 return render\_template('eq\_location.html', drop\_down = eq\_area\_list)  
  
  
@app.route('/eqoutput', methods=['GET', 'POST'])  
def eq\_output():  
 earthquakes = []  
 eq\_area = []  
 if request.method == 'POST':  
 distance = request.form.get('dist')  
 area = request.form.get('areas')  
 cursor.execute("SELECT id ,latitude, longitude, place, Area = right(rtrim([place]),charindex(' ',reverse(rtrim([place]))+' ')-1) From earthquake\_data where right(rtrim([place]),charindex(' ',reverse(rtrim([place]))+' ')-1)= ? AND CAST (SUBSTRING (place,0,PATINDEX('%km%',place)) as INT) >=?", area, distance)  
 for data in cursor:  
 earthquakes.append(data)  
 earthquake\_len = len(earthquakes)  
 cursor.execute("SELECT Area = right(rtrim([place]),charindex(' ',reverse(rtrim([place]))+' ')-1) From earthquake\_data")  
 for data in cursor:  
 for value in data:  
 eq\_area.append(value)  
 eq\_area\_list = list(set(eq\_area))  
 return render\_template('eq\_location.html', earthquakes = earthquakes, length = earthquake\_len, drop\_down = eq\_area\_list)  
  
  
@app.route('/earthquakeclusters', methods=['GET', 'POST'])  
def earthquake\_clusters():  
 earthquakes1 = []  
 earthquakes2 = []  
 earthquakes3 = []  
 earthquakes4 = []  
 earthquakes5 = []  
 earthquakes6 = []  
 earthquakes7 = []  
 earthquakes8 = []  
 earthquakes9 = []  
 earthquakes10 = []  
 if request.method == 'POST':  
 clusterby = request.form.get('cluster')  
  
 if clusterby == "Magnitude":  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag>'-2.0' and Mag<'-1.0'")  
 for data in cursor:  
 earthquakes1.append(data)  
 earthquake\_len1 = len(earthquakes1)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag>'-1.0' and Mag<0.0")  
 for data in cursor:  
 earthquakes2.append(data)  
 earthquake\_len2 = len(earthquakes2)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag>0.0 and Mag<1.0")  
 for data in cursor:  
 earthquakes3.append(data)  
 earthquake\_len3 = len(earthquakes3)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag>1.0 and Mag<2.0")  
 for data in cursor:  
 earthquakes4.append(data)  
 earthquake\_len4 = len(earthquakes4)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag>2.0 and Mag<3.0")  
 for data in cursor:  
 earthquakes5.append(data)  
 earthquake\_len5 = len(earthquakes5)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag>3.0 and Mag<4.0")  
 for data in cursor:  
 earthquakes6.append(data)  
 earthquake\_len6 = len(earthquakes6)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag>4.0 and Mag<5.0")  
 for data in cursor:  
 earthquakes7.append(data)  
 earthquake\_len7 = len(earthquakes7)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag>5.0 and Mag<6.0")  
 for data in cursor:  
 earthquakes8.append(data)  
 earthquake\_len8 = len(earthquakes8)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag>6.0 and Mag<7.0")  
 for data in cursor:  
 earthquakes9.append(data)  
 earthquake\_len9 = len(earthquakes9)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Mag>7.0 and Mag<8.0")  
 for data in cursor:  
 earthquakes10.append(data)  
 earthquake\_len10 = len(earthquakes10)  
  
 return render\_template('mag\_clusters.html', earthquakes1 = earthquakes1, length1= earthquake\_len1, earthquakes2 = earthquakes2, length2= earthquake\_len2, earthquakes3 = earthquakes3, length3= earthquake\_len3, earthquakes4 = earthquakes4, length4= earthquake\_len4, earthquakes5 = earthquakes5, length5= earthquake\_len5, earthquakes6 = earthquakes6, length6= earthquake\_len6, earthquakes7 = earthquakes7, length7= earthquake\_len7, earthquakes8 = earthquakes8, length8= earthquake\_len8, earthquakes9 = earthquakes9, length9= earthquake\_len9, earthquakes10 = earthquakes10, length10= earthquake\_len10)  
  
 elif clusterby == 'Magnitude Type':  
 types = []  
 cursor.execute("select distinct Magtype from earthquake\_data")  
 for data in cursor:  
 types.append(data)  
 print(types)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Magtype=?",types[0])  
 for data in cursor:  
 earthquakes1.append(data)  
 earthquake\_len1 = len(earthquakes1)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Magtype=?",types[1])  
 for data in cursor:  
 earthquakes2.append(data)  
 earthquake\_len2 = len(earthquakes2)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Magtype=?",types[2])  
 for data in cursor:  
 earthquakes3.append(data)  
 earthquake\_len3 = len(earthquakes3)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Magtype=?",types[3])  
 for data in cursor:  
 earthquakes4.append(data)  
 earthquake\_len4 = len(earthquakes4)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Magtype=?",types[4])  
 for data in cursor:  
 earthquakes5.append(data)  
 earthquake\_len5 = len(earthquakes5)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Magtype=?",types[5])  
 for data in cursor:  
 earthquakes6.append(data)  
 earthquake\_len6 = len(earthquakes6)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Magtype=?",types[6])  
 for data in cursor:  
 earthquakes7.append(data)  
 earthquake\_len7 = len(earthquakes7)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Magtype=?",types[7])  
 for data in cursor:  
 earthquakes8.append(data)  
 earthquake\_len8 = len(earthquakes8)  
  
 cursor.execute("select Time, Latitude, Longitude, Depth, Mag, Magtype, Place, LocationSource from earthquake\_data where Magtype=?",types[8])  
 for data in cursor:  
 earthquakes9.append(data)  
 earthquake\_len9 = len(earthquakes9)  
  
 return render\_template('magtype\_cluster.html', earthquakes1 = earthquakes1, length1= earthquake\_len1, earthquakes2 = earthquakes2, length2= earthquake\_len2, earthquakes3 = earthquakes3, length3= earthquake\_len3, earthquakes4 = earthquakes4, length4= earthquake\_len4, earthquakes5 = earthquakes5, length5= earthquake\_len5, earthquakes6 = earthquakes6, length6= earthquake\_len6, earthquakes7 = earthquakes7, length7= earthquake\_len7, earthquakes8 = earthquakes8, length8= earthquake\_len8, earthquakes9 = earthquakes9, length9= earthquake\_len9)  
  
  
@app.route('/nightquake', methods=['GET', 'POST'])  
def night\_quake():  
 earthquakes = []  
 if request.method == 'POST':  
 magnitude = request.form.get('night')  
 cursor.execute("select time,mag from earthquake\_data where (cast(time as time) not between '08:00:00' and '18:00:00') and mag > ?", magnitude)  
 for data in cursor:  
 earthquakes.append(data)  
 earthquake\_len = len(earthquakes)  
 return render\_template('night\_quake.html', earthquakes = earthquakes, length = earthquake\_len)  
  
  
if \_\_name\_\_ == '\_\_main\_\_':  
 app.run()

index.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>Assignment 2</title>  
</head>  
<body>  
<div style="text-align: center">  
 <h1>Yaswanth Janardhan Konduru</h1>  
 <h3>1001741845</h3>  
</div>  
<div>  
 <form action="{{url\_for('index')}}" enctype=multipart/form-data method="POST" style="width:30%;">  
 <fieldset>  
 <legend>CSV Upload</legend>  
 <label for="csvupload">Select the CSV file to upload</label>  
 <input type="file" id="csvupload" name="csvupload"><br><br>  
 <input type="submit" value="Upload">  
 </fieldset>  
 </form>  
 <form action="{{url\_for('eq\_count')}}" enctype=multipart/form-data method="POST" style="width:30%;">  
 <fieldset>  
 <legend>Search Earthquakes</legend>  
 <label for="count">Search for earthquakes with magnitude greater than</label>  
 <input type="text" id="count" name="count"><br><br>  
 <a href="/eqcount"><input type="submit" value="Find"></a>  
 </fieldset>  
 </form>  
 <form action="{{url\_for('range\_count')}}" enctype=multipart/form-data method="POST" style="width:30%;">  
 <fieldset>  
 <legend>Search Earthquakes with range</legend>  
 <label>Search for earthquakes with magnitude range and time</label><br><br>  
 <label for="count">Start range</label>  
 <input type="text" id="startrange" name="startrange">  
 <label for="count">End range</label>  
 <input type="text" id="stoprange" name="stoprange"><br><br>  
 <label for="timerange">Select the time range</label>  
 <input type="radio" name="timerange" id="timerange" value="Recent Week">Recent Week  
 <input type="radio" name="timerange" value="Month">Month<br><br>  
 <a href="/rangecount"><input type="submit" value="Find"></a>  
 </fieldset>  
 </form>  
  
 <form action="{{url\_for('earthquake\_clusters')}}" enctype=multipart/form-data method="POST" style="width:30%;">  
 <fieldset>  
 <legend>Earthquake Clusters</legend>  
 <label>Select an option to clusters the earthquakes</label><br><br>  
 <input type="radio" name="cluster" value="Magnitude">Magnitude  
 <input type="radio" name="cluster" value="Magnitude Type">Magnitude Type<br><br>  
 <a href="/earthquakeclusters"><input type="submit" value="Find"></a>  
 </fieldset>  
 </form>  
 <form action="{{url\_for('night\_quake')}}" enctype=multipart/form-data method="POST" style="width:30%;">  
 <fieldset>  
 <legend>Search Earthquakes</legend>  
 <label for="night">Enter the mag values to search for earthquakes during night</label>  
 <input type="text" id="night" name="night"><br><br>  
 <a href="/nightquake"><input type="submit" value="Find"></a>  
 </fieldset>  
 </form>  
 <form action="{{url\_for('eq\_location')}}" enctype=multipart/form-data method="POST" style="width:30%;">  
 <fieldset>  
 <legend>Earthquake based on location</legend>  
 <label>Find earthquakes that were near (20 km, 50 km?) of a specified location.</label>  
 <a href="/eqlocation"><input type="submit" value="Find"></a>  
 </fieldset>  
 </form>  
</div>  
</body>  
</html>

Night\_quake.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>Assignment 2</title>  
</head>  
<body>  
<div style="text-align: center">  
 <h1>Yaswanth Janardhan Konduru</h1>  
 <h3>1001741845</h3>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Mag</th>  
 </tr>  
 {% for values in earthquakes %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes is:</h3>  
 <h5>{{length}}</h5>  
</div>  
</body>  
</html>

Magtype\_cluster.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>Assignment 2</title>  
</head>  
<body>  
<div style="text-align: center">  
 <h1>Yaswanth Janardhan Konduru</h1>  
 <h3>1001741845</h3>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes1 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes where Mag Type is md</h3>  
 <h5>{{length1}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes2 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes where Mag Type is mwr</h3>  
 <h5>{{length2}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes3 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes where Mag Type is mb</h3>  
 <h5>{{length3}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes4 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes where Mag Type is mh</h3>  
 <h5>{{length4}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes5 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes where Mag Type is mw</h3>  
 <h5>{{length5}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes6 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes where Mag Type is mb\_lg</h3>  
 <h5>{{length6}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes7 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes where Mag Type is mww</h3>  
 <h5>{{length7}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes8 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes where Mag Type is NA</h3>  
 <h5>{{length8}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes9 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes where Mag Type is ml</h3>  
 <h5>{{length9}}</h5>  
</div>  
</body>  
</html>

Mag\_clusters.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>Assignment 2</title>  
</head>  
<body>  
<div style="text-align: center">  
 <h1>Yaswanth Janardhan Konduru</h1>  
 <h3>1001741845</h3>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
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 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes1 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes with MAG between -2.0 and -1.0 is:</h3>  
 <h5>{{length1}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
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 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes2 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes with MAG between -1.0 and 0.0 is:</h3>  
 <h5>{{length2}}</h5>  
</div>  
<div>  
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 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes3 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes with MAG between 0.0 and 1.0 is:</h3>  
 <h5>{{length3}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
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 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes4 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes with MAG between 1.0 and 2.0 is:</h3>  
 <h5>{{length4}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
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 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes5 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes with MAG between 2.0 and 3.0 is:</h3>  
 <h5>{{length5}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
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 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes6 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes with MAG between 3.0 and 4.0 is:</h3>  
 <h5>{{length6}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
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 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes7 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes with MAG between 4.0 and 5.0 is:</h3>  
 <h5>{{length7}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
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 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes8 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes with MAG between 5.0 and 6.0 is:</h3>  
 <h5>{{length8}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
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 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes9 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes with MAG between 6.0 and 7.0 is:</h3>  
 <h5>{{length9}}</h5>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
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 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes10 %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes with MAG between 7.0 and 8.0 is:</h3>  
 <h5>{{length10}}</h5>  
</div>  
</body>  
</html>

Range\_count.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>Assignment 2</title>  
</head>  
<body>  
<div style="text-align: center">  
 <h1>Yaswanth Janardhan Konduru</h1>  
 <h3>1001741845</h3>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
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 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes is:</h3>  
 <h5>{{length}}</h5>  
</div>  
</body>  
</html>

Eq\_count.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>Assignment 2</title>  
</head>  
<body>  
<div style="text-align: center">  
 <h1>Yaswanth Janardhan Konduru</h1>  
 <h3>1001741845</h3>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">Time</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Depth</th>  
 <th style="border:1px solid black">Mag</th>  
 <th style="border:1px solid black">Magtype</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">LocationSource</th>  
 </tr>  
 {% for values in earthquakes %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>>  
 <h3>Count of earthquakes is:</h3>  
 <h5>{{length}}</h5>  
</div>  
</body>  
</html>

Eq\_location.html

<!DOCTYPE html>  
<html>  
<head>  
 <title>Assignment 2</title>  
</head>  
<body>  
<div style="text-align: center">  
 <h1>Yaswanth Janardhan Konduru</h1>  
 <h3>1001741845</h3>  
</div>  
<div>  
 <form action="{{url\_for('eq\_output')}}" enctype=multipart/form-data method="POST" style="width:30%;">  
 <fieldset>  
 <legend>Earthquake based on location</legend>  
 <label>Find earthquakes that were near (20 km, 50 km?) of a specified location.</label><br><br>  
 <label for="dist">Distance</label>  
 <input type="text" id="dist" name="dist"><br><br>  
 <label for="areas">Select the Area</label>  
 <select name="areas" id="areas">  
 {% for values in drop\_down %}  
 <option value="{{values}}">{{values}}</option>  
 {% endfor %}  
 </select>  
 <a href="/eqoutput"><input type="submit" value="Find"></a>  
 </fieldset>  
 </form>  
</div>  
<div>  
 <table style="border:1px solid black">  
 <tr style="border:1px solid black">  
 <th style="border:1px solid black">ID</th>  
 <th style="border:1px solid black">Latitude</th>  
 <th style="border:1px solid black">Longitude</th>  
 <th style="border:1px solid black">Place</th>  
 <th style="border:1px solid black">Area</th>  
 </tr>  
 {% for values in earthquakes %}  
 <tr style="border:1px solid black">  
 {% for data in values %}  
 <td style="border:1px solid black">{{data}}</td>  
 {% endfor %}  
 </tr>  
 {% endfor %}  
 </table>  
 <h3>Count of earthquakes is:</h3>  
 <h5>{{length}}</h5>  
</div>  
</body>  
</html>